Association for Information Systems
AIS Electronic Library (AISeL)

ECIS 2006 Proceedings

European Conference on Information Systems (ECIS)

2006

The moderating effect of transaction experience on value-driven internet shopping

Sumeet Gupta
National University of Singapore, sumeetgu@comp.nus.edu.sg

Hee W. Kim
National University of Singapore, kimhw@comp.nus.edu.sg

THE MODERATING EFFECT OF TRANSACTION EXPERIENCE ON VALUE-DRIVEN INTERNET SHOPPING

Gupta, Sumeet, School of Computing, National University of Singapore, 3 Science Drive 2, Singapore, 117543, sumeetgu@comp.nus.edu.sg

Hee-Woong, Kim, School of Computing, National University of Singapore, 3 Science Drive 2, Singapore, 117543, kimhw@comp.nus.edu.sg

Abstract

Internet vendors invest a considerable amount on acquiring customers with the expectation that the early investment in customer acquisition will result in a long-term stream of profits from repeat customers. However, it has been found that over 50% of repeat customers seldom complete their third purchase with the Internet vendor. This may be due to lack of proper understanding of customer decision making and a lack of differentiation between less-experienced and more-experienced repeat customers. Therefore, Internet vendors need to understand the decision making process of their repeat customers. Customer decision making has been studied from value perspective in the fields of economics and marketing and have been replicated in the IS field also. However, the focus in IS studies has largely been on new customers. Moreover, the IS studies lack consideration of changes in customer information processing with transaction experience. This research, therefore, studies the moderating effect of transaction experience on repeat customer value-driven Internet shopping behaviour. Understanding the changes in repeat customer decision making would help Internet vendors in outlining sales strategies to ensure continuous sales and long-term profitability.

Keywords: Information processing theory, Internet shopping, mental accounting theory, repeat customers.

1 INTRODUCTION

Customer acquisition on Internet is enormously expensive owing to lower search costs as well as the presence of risks and uncertainty. Therefore, Internet vendors outlay a substantial portion of their expenditure on acquiring new customers with the expectation that the early investment in customer acquisition will result in a long-term stream of profits from repeat customers. In practice, however, it has been observed that over 50% of repeat customers stop visiting completely before their third anniversary (Reichheld and Schefter 2000). One of the reasons is a lack of fit between the service provided by the Internet vendor and the requirements of the repeat customers. If the Internet vendor understands the decision making process of its repeat customers, it can align its sales strategy accordingly to the requirements of its repeat customers, thus improving retention rates. Another reason for low retention of repeat customers is that the Internet vendors do not differentiate between less-experienced and more-experienced repeat customers and employ same retention strategy with all repeat customers. Less-experienced repeat customers and more-experienced repeat customers differ in their purchase decision making (Bettman and Park 1980) and by differentiating between them, Internet vendors can employ customize strategies, thus improving customer retention and profitability.

Customer decision making has been studied from the value perspective in economics (e.g., Kahneman and Tversky 1979, Thaler 1985), marketing (e.g., Dodds & Monroe & Grewal 1991, Zeithaml 1988) and its role has been replicated in IS studies also (e.g., Chen and Dubinsky 2003). However the study of online customer choice and decision making has largely been limited to the study of potential customers only. Moreover, most of the studies focus on cognitive processing that occurs immediately prior to the act of purchase (or selection). Yet many decisions are made repeatedly or frequently over time and thus involve continuous processing. In such instances, customer information sources are not only the available information from the Internet vendor, but also the prior information and evaluations stored in memory. Also, the importance a customer gives to prior information and available information may change over customer transaction experience with the Internet vendor, which implies that the strategies adopted by Internet vendor for less-experienced repeat customer may not be optimal for more-experienced repeat customers.

In view of the above discussion, we examine the moderating role of transaction experience on customer repeat purchase decision making from the value perspective. We specifically seek to answer the following research questions. (1) What are the factors that affect repeat customers value-driven Internet shopping decision-making? (2) What is the role of transaction experience in customer choice and decision-making regarding Internet shopping? The research contributes to the understanding of customer repeat purchase decision-making over Internet by developing a value-based model of customer choice under risk. It also contributes by examining the changes in repeat customer decision making as well as outlining strategies for Internet vendors for ensuring continuous sales and profitability.

2 THEORETICAL BACKGROUND

2.1 Prospect Theory and Mental Accounting Theory

Internet shopping is characterized by risk and uncertainty on the part of customers. Therefore, theories that explain customer choice and decision making under conditions of risk and uncertainty should shed light on customer behaviour in the context of Internet shopping. Two such theories are prospect theory (Kahneman and Tversky 1979) and mental accounting theory (Thaler 1985). Prospect theory (Kahneman and Tversky 1979) models actual customer behaviour rather than rational/optimal customer behaviour. This is important in Internet shopping as customer behaviour deviates from rational/optimal behaviour due to risk and uncertainty. According to prospect theory, under conditions

of uncertainty customers maximize value of their choice and decision making (Kahneman and Tversky 1979). Prospect theory suggests that people put more weight on positive outcomes that are considered certain than positive outcomes that are deemed merely probable. This certainty effect causes people to be risk averse when making decisions involving gains (i.e., people tend to opt for smaller but certain gains rather than larger but only probable gains). Kahneman and Tversky (1979) describe risk aversion as the best known generalization about risky choices involving gains. Using prospect theory as the basis, Thaler (1985) proposed mental accounting theory. As an enhancement of prospect theory, mental accounting theory incorporates compound outcomes, which is in contrast with prospect theory's value function (which is defined over only a single uni-dimensional outcome). Mental accounting theory is therefore more appropriate for the analysis of Internet shopping as customers tend to make decisions based on multiple factors rather than a single factor.

According to mental accounting theory, customers analyze transaction in two stages, namely *evaluating potential transactions* (judgment process) and *approving or disproving of each potential transaction* (decision process). For *evaluating potential transactions*, Thaler (1985) proposes two types of utility namely acquisition utility and transaction utility. Acquisition utility is the value of the good received compared to the outlay (Thaler 1985). It is a function of value equivalent of the product and its objective price (Thaler 1985). Value equivalent of the product refers to the amount of money that would leave the individual indifferent between receiving the cash or the product as a gift. Objective price is the total amount that a customer has to pay to receive/use the product. Transaction utility refers to the perceived merits of a transaction or a deal. It is based on the difference between the objective price and the reference price of the product. Total utility from a purchase is just the sum of acquisition utility and transaction utility (Thaler 1985). For *making purchase decisions*, customers maximize their total utility with reference to the mental account corresponding to the product being purchased (Thaler 1985). This specific mental account is restricted by the budget allocated to that mental account.

2.2 Determinants of Value-driven Internet Shopping

Since we are studying Internet shopping, the ultimate consumption act of a product, and hence acquisition utility, from any online store would be the same. Therefore, we will measure transaction utility for shopping on Internet with reference to a specific online store rather than for any individual product. Previous research (e.g., Dodds et al. 1991, Grewal & Monroe & Krishnan 1998, Urbany & Bearden & Kaicker & Borrero 1997) has mainly focused on the monetary aspect of transaction utility whereby it is measured as a difference between the objective price and the customer's reference price. However, customers do not always buy from a lowest priced online store. Other non-monetary aspects such as time and effort (Downs 1961) may also be critical for customers (Zeithaml 1988). Moreover, risk and uncertainty may be other important factors in Internet transactions. Risk and uncertainty reduce the attractiveness of purchasing online as customer deception by Internet vendors is becoming increasingly common (Grewal & Iyer & Krishnan & Sharman 2003). Apart from these purely cognitive reasons, customers' intrinsic (hedonic) motivation of shopping may also influence the non-monetary aspect of transaction utility of shopping online (Deci 1975). Intrinsic motivation refers to the performance of an activity for no apparent reinforcement other than the process of performing the activity per se (Deci 1975). Thus, we measure transaction utility from both monetary perspective (namely perceived price) and non-monetary perspective (perceived risk representing risk and uncertainty, convenience representing time and effort, and pleasure representing intrinsic motivation for purchasing online). These are discussed in detail below.

The monetary aspect of transaction utility is the difference between the objective price of a product and its reference price. In the marketing literature (e.g., Dodds et al. 1991, Gurumurthy 1995) reference price is referred to as the perceived price. However, in terms of empirical measurement it is measured as a reference price discrepancy variable (such as observed price – reference price) (Gurumurthy 1995). The primary reason for such a measurement is that it is difficult to measure

customers' reference price. Customers do not usually remember the actual price of a shopping object (Zeithaml 1988). Instead, they mentally encode prices in ways that are meaningful to them such as higher or lower than their reference price (Dodds et al. 1991). Such outcomes drive the price perceptions of customers, which in turn influence their decisions through transaction utility. Therefore, we define perceived price as *the perceived level of (monetary) price at a vendor (i.e., objective price) in comparison with the customer's reference price*.

We consider risk as a non-monetary aspect (risk and uncertainty) of making transactions on the Internet as it is considered to be an important component in customer decision making (Grewal et al. 2003). Following previous research (Mowen 1992), we define perceived risk as *a consumer's perception of the uncertainty and adverse consequences of transacting with a vendor*. The risks associated with Internet shopping inhibit customers from making purchases online (Hoffman et al. 1999). Even if customers are expected to gain more benefits than sacrifices, they may still show risk-aversion behavior as predicted by prospect theory (Kahneman and Tversky 1979).

We consider convenience as a non-monetary aspect (time and effort) of making transactions on Internet as it is considered as one of the most important factors for e-commerce growth (Torkzadeh and Dhillon 2002). Following Berry, Seiders and Grewal (2002) we define convenience as *customers' time and effort perceptions of shopping on the Internet.* Convenience of an online store is reflected in various shopping related activities such as search, product information, ordering, payments, delivery, and so on. This difference in convenience would reflect in customers' transaction utility of shopping from an online store.

Consumption emotion refers to a set of emotional responses elicited specifically during product usage or consumption experiences. All emotional states can be represented by some combination of two major dimensions: pleasure and arousal (Mehrabian and Russell 1974). The evidence for arousal regarding purchase has been inconsistent (Donovan & Rossiter & Marcoolyn & Nesdale 1994). Hence, we use pleasure to represent the customers' intrinsic motivation to shop on Internet. Following Mehrabian and Russell (1974), we define pleasure as *the degree to which a customer feels good or happy with the transactions made with the online vendor*.

2.3 Role of Transaction Experience in Customer choice and decision making

Information processing theory of customer choice (Bettman 1979) and subsequent empirical studies (see Alba and Hutchinson 1987) discuss the effects of transaction experience on customers' choice and decision-making. Customer's prior experience affects the manner in which they analyze and store information (memory) (Bettman 1979). First, regarding customer information analysis, prior knowledge and experience increases the likelihood of analytical processing in general (Alba and Hutchinson 1987). With increased analytic processing a customer becomes more selective in information search and deep in the analysis of available information. With increasing transaction experience customers become better equipped to understand the meaning of transaction information as they have highly developed conceptual structures through experience (Alba and Hutchinson 1987). Therefore, with increasing transaction experience repeat customers can be more selective in information processing by focusing on relevant and important information than less experienced repeat customers. In contrast, less experienced repeat customers are inferior in comprehending and evaluating information and attributes of Internet shopping at the focal vendor as compared to more experienced repeat customers. Second, regarding information storage in memory, prior experience and knowledge may also be relevant to a judgment. As customers have transaction experiences, their experiences and knowledge are accumulated in their memory. The amount of information recalled depends upon the task for which the information is recalled (Bettman 1979). When the task is regarding evaluating a product/service, customers recall most of the information needed for evaluation. When the task is to make a choice, they recall only the information necessary for decision making. With increasing transaction experience the ability to recall information needed for evaluation and important and decision-relevant information increases (Alba and Hutchinson 1987).

3 RESEARCH MODEL AND HYPOTHESES

Based on the above discussion we developed the research model (Figure 1). Past studies on consumer decision making (e.g., Kahneman and Tversky 1979, Thaler 1985, Zeithaml 1988) make the common assumption that customers seek value maximization. Customers prefer to conduct transactions with vendors whose products (including services) offer maximal value. According to prospect theory, customers evaluate different prospects based on the value of each prospect relative to some reference and the degree of risk involved in choosing that prospect. According to mental accounting theory, customers make their purchase decisions based on maximum value in the decision making stage. Empirical results (e.g., Dodds et al. 1991, Zeithaml 1988) also support that perceived value leads to purchase intention. Hence:

H1: Perceived value positively influences purchase intention for repeat customers.

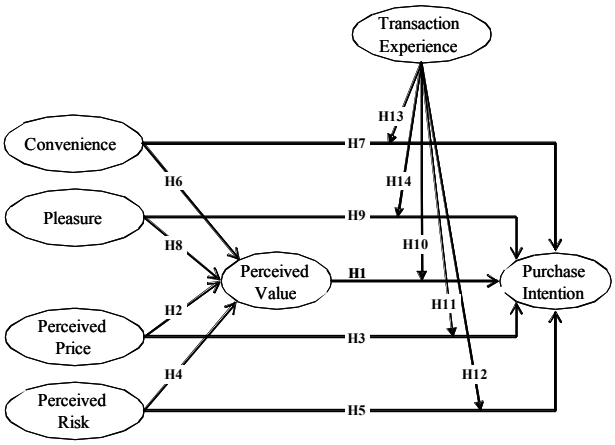


Figure 1: Research Model

Price can be seen as a monetary sacrifice for obtaining a product or as a signal of product quality (Zeithaml 1988). In the context of Internet shopping, product quality is comparable across vendors as the products (e.g., books and CDs) are mostly low-touch in nature, and customers are generally familiar with the product attributes. Hence, price is more often considered a monetary sacrifice than a signal of product quality by the repeat customers of on online store (Reibstein 2002). Based on the mental accounting theory, perceived price can impact the monetary dimension of transaction utility. An increase in perceived price implies lower transaction utility. As transaction utility is a component of overall value according to mental accounting theory, perceived price should negatively affect total value. Prior research (e.g., Dodds et al. 1991) has found that perceived price is negatively related to the perceived value of a transaction. In addition to the indirect effect of perceived price on purchase intention through perceived value, perceived price may also exert a direct effect on purchase intention. A high perceived price implies that the objective price of a product is higher than the customer's reference price (Dodds et al. 1991), which means financial loss in the transaction. Hence:

H2: Perceived price negatively influences perceived value for repeat customers.

H3: Perceived price negatively influences purchase intention for repeat customers.

According to mental accounting theory, an increase in customer risk perception (non-monetary sacrifice) would lower transaction utility. As transaction utility influences overall perceived value, perceived risk should negatively affect perceived value of Internet shopping. It is the presence of risks and uncertainty in the Internet shopping, which makes seemingly attractive deals (such as low priced offerings) unattractive. Thus, perceived risk should negatively influence perceived value. Apart from indirect effect on purchase intention through perceived value, perceived risk may also influence purchase intention directly. According to prospect theory, customers put more weight on outcomes

that are considered certain relative to outcomes which are considered merely probable (certainty effect). In other words, customers exhibit risk aversion behaviour in situations of high uncertainty and risk and are motivated to minimize the expected negative consequences of purchases. Hence:

H4: Perceived risk negatively influences perceived value for repeat customers.

H5: Perceived risk negatively influences purchase intention for repeat customers.

Convenience is one of the most important benefits of Internet shopping (Jarvenpaa and Todd 1997) According to mental accounting theory, greater convenience means less mental and physical energy is expended in obtaining a product which reduces the time and effort thereby increasing transaction utility (Downs 1961). As transaction utility is a component of overall perceived value according to mental accounting theory, convenience in Internet shopping would influence customer perceived value of shopping on Internet. In addition to indirect effect of convenience on perceived value, convenience also has a direct influence on purchase intention. Greater convenience of purchasing from an Internet store enhances customer intention to purchase from that Internet store. The issue of convenience has been associated with the trial and adoption of non-store shopping environments (Fenech and O'Cass 2001). Not only the Internet, but also other non-store shopping environments such as home shopping and tele-shopping are popular for the convenience in shopping. Hence:

H6: Convenience positively influences perceived value for repeat customers.

H7: Convenience positively influences purchase intention for repeat customers.

Research in customers' affective processing mechanism posits that the emotions elicited during consumption experiences leave strong affective traces or markers in episodic memory (Cohen and Areni 1991). The memory elements are then believed to be highly accessible to current cognitive operations. When an evaluation of the relevant consumption experience (or its associated product or service) is required, the affective traces are readily retrieved and their variances are integrated into the evaluative judgment. Hedonic (affective) sources of value have long been recognized to affect customer perceived value (Sweeney and Soutar 2001). Thus, pleasure, as an emotional response to purchases made from the Internet vendor would influence customer perceived value of Internet shopping. Pleasure may also have a direct effect on purchase intention. Theory of emotion and adaptation (Lazarus 1991) identifies coping responses as important mechanisms for inferring action and goal attainment from feelings. Depending on the feelings generated, behavioural intentions emerge to activate plans for the avoidance of undesirable outcomes or the increase/maintenance of positive outcomes. This means that customers desire to increase/maintain positive outcomes, and based on this, they develop their behavioural intentions. Moreover, pleasure acts as an intrinsic motivator for customers to shop online. Hence:

H8: Pleasure positively influences perceived value for repeat customers.

H9: Pleasure positively influences purchase intention for repeat customers.

With greater transaction experience, customers' ability to recall a greater amount of important and decision-relevant information increases because of their improved discrimination between relevant and unimportant product information. While transaction experience influences the amount of information recalled for decision making, the type of decision task to be performed influences the quality of information recalled for decision making. When the decision task is to evaluate (overall perceived value) an Internet store, customers recall most of the information and the amount of information recalled increases with transaction experience. However, when the decision task is to make a purchase decision, customers recall only the decision relevant information and the focus on decision relevant information increases with transaction experience. This means that the effect of perceived value on purchase intention would become weak over transaction experience. Hence:

H10: Transaction experience will negatively moderate the relationship between perceived value and purchase intention.

Studies (e.g., Reichheld and Schefter 2000) in customer repeat purchase behaviour suggest that repeat customers are less price-sensitive and spend more with the Internet store. According to Information processing theory of customer choice, in the first few purchases repeat customers may be quite sensitive to attribute information and since they have the ability to analyze information they may seek greater information about a particular attribute such as price. However, as their experience increases, repeat customers tend to reduce the cognitive effort in decision making thus simplifying their decisions. Therefore, decisions for more-experienced customers will be based on their previous evaluation and judgment. This implies that the impact of any attribute such as price on purchase intention should decrease with transaction experience. Hence:

> H11: Transaction experience will negatively moderate the relationship between perceived price and purchase intention for repeat customers.

Perceived risk of transaction reduces with increasing transaction experience as the certainty involved in the transaction increases. Less-experienced repeat customers may perceive some uncertainty in transaction as they may not have full confidence in the Internet vendor. However, as the transaction experience increases, customer's confidence in the Internet vendor increases and hence the influence of perceived risk on purchase intention reduces. Hence:

> H12: Transaction experience will negatively moderate the relationship between perceived risk and purchase intention for repeat customers.

According to information processing theory of customer choice, the less-experienced customers may analyze convenience of Internet shopping more deeply as compared to more-experienced customers. More-experienced customers may have superior ability to analyze convenience information, but may not have the motivation to do so (Bettman and Park 1980). With increasing purchases customers would simply assume that Internet shopping from a particular store is convenient and therefore this information would be residing in their latent memory. The influence of convenience on purchase intention would therefore reduce with transaction experience. Hence:

> H13: Transaction experience will negatively moderate the relationship between convenience and purchase intention.

In online purchase failures may occur during ordering, processing or delivery. Failures cause dissatisfaction and displeasure and a negative perception of the offering of the Internet store in the minds of the customers. Customers' cumulative pleasure with the previous purchases is therefore dynamically adjusted with the new information such as service failure/success and it affects their purchase intention. However, the magnitude of this adjustment will depend upon customers' transaction experience with the Internet store. Customers, who have more transaction experience with the Internet store, weigh prior cumulative pleasure more heavily than the new information regarding success or failure. Hence:

> H14: Transaction experience will positively moderate the relationship between pleasure and purchase intention.

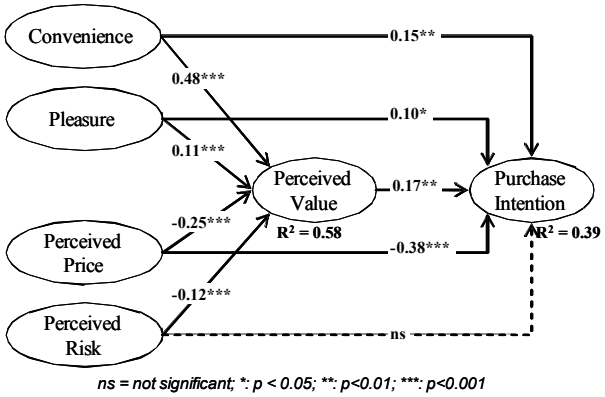
4 RESEARCH METHODOLOGY AND DATA ANALYSIS

We chose an Internet bookstore for this study because it one of most commonly purchased online products. The bookstore receives 144,000 visits daily and sells about 18,000 books daily. It is not a well-known online bookstore like Amazon.com, but a relatively small vendor. The empirical data for this study was collected via an Internet survey for a period of 10 days through the bookstore's web site, where a banner on the home page publicized the survey. The first page of the survey web site clearly explained who repeat customers are. USD10 was offered to 200 respondents by lottery to improve the response rate. We received a total of 810 valid responses. The survey instrument was developed by adopting existing validated questions wherever possible and developing items wherever required.

We carried out data analysis in accordance with a two-stage methodology (Anderson and Gerbing 1988) using LISREL. First, we checked for uni-dimensionality. The test results indicated that the second item of perceived price (PRCE2) violated uni-dimensionality, and discarding it would reduce chi-square significantly. Therefore PRCE2 was dropped. Other items were not dropped as the error covariance between a pair of items resulted in little change in chi-square (< 20), thus preventing over-fitting. After dropping PRCE2, the CFA showed good fit.

Next, we assessed the convergent validity and discriminant validity of the constructs. All standardized path coefficients (except PRCE1, RISK4) were greater than 0.7. The individual path loadings were all greater than twice their standard error. The t-statistic was significant for all the items. The CR for each construct was greater than 0.7, and the AVE for each construct was greater than 0.5. Thus convergent validity was adequately established. Discriminant validity can also be assessed using constrained test (Byrne1998) for each pair of constructs used. A significant χ^2 statistic would indicate discriminant validity. All χ^2 statistics were significant, indicating that the measurement model was significantly better than other alternative models (obtained by combining pairs of latent constructs). Hence, the questions used in this study had discriminant validity.

We then examined the structural model. The hypothesis testing results suggest that the measurement model adequately fits the data (Figure 2). Perceived price, perceived risk, shopping convenience and pleasure significantly influence perceived value and explain 58% of variance. Also, shopping convenience, pleasure, perceived price and perceived value are significant antecedents of purchase intention and explain 39% of variance. Thus, all hypotheses were supported except H5.



Normed χ^2=3.15, GFI=0.93, AGFI=0.91, NFI=0.98, CFI=0.99, RMSEA=0.052, Std. RMR=0.034.

Figure 2: Structural Model

To test the moderating role of transaction experience, we conducted moderated regression analysis (MRA) as suggested by Sharma, Durand, and Oded (1981). The results of the analysis are shown in Table 1. The results reveal that transaction experience significantly influences purchase intention (β = 0.116, p-value = 0.000). Also, the Models I, II and III are all significantly different from each other. Now, we consider the coefficients of the interaction terms. The results reveal that the transaction experience negatively moderates the effect of perceived price on purchase intention (β = 0.108, p-value = 0.001) and convenience on purchase intention (β = -0.125, p-value = 0.003). There is no moderating effect of transaction experience on the relationship of perceived value, pleasure and perceived risk with purchase intention. This implies that the transaction experience is a quasi-moderator (Sharma et al. 1981) of the relationships between perceived price and purchase intention, and convenience and purchase intention. Thus, H11 and H13 are supported, while H10, H12 and H14 were not supported. The inclusion of moderating effect improves the explanation of customers' purchase intention by 3.1% and thus the total variance explained by the moderation effects model is 35.5%. We also test the multicollinearity diagnostics. The VIF values are in the range of 1.094 – 2.549 and the condition indices are less than 3.44. Thus, multicollinearity is not likely to be a problem.

Variables			Standardized Beta		
			Model I	Model II	Model III
Criterion	*Purchase Intention*				
Predictors	*Perceived Value (PVAL)*		0.173***	0.172***	0.192***
	Perceived Price (PRCE)		-0.300***	-0.304***	-0.289***
	Perceived Risk (RISK)		0.041	0.049	0.035
	Convenience (CONV)		0.169***	0.152***	0.130**
	Pleasure (PLEA)		0.119**	0.126***	0.119**
Moderator	*Transaction Experience (TranExp)*			0.116***	0.136***
Interaction Terms	*TranExp*PVAL*				0.066
	*TranExp*PRCE*				0.108**
	*TranExp*RISK*				-0.049
	*TranExp*CONV*				-0.125**
	*TranExp*PLEA*				-0.030
Results of Analysis	R^2		0.324	0.337	0.355
	ΔR^2 / *F-stat*	*Model I and II*	*0.013 / 15.73* ***		
		Model I and III	*0.018 / 4.45***		
		Model II and III	*0.031 / 6.38****		

Table 1: Moderated Regression Analysis

5 DISCUSSION

The objective of this research was to examine the moderating role of transaction experience on customer repeat purchase decision making from the value perspective. First, we first developed a value-driven decision model for repeat customers based on mental accounting theory and found the factors affecting repeat customer purchase decision-making. Secondly, we examined the moderating role of transaction experience in explaining customer choice and decision making from the perspective of information processing theory of customer choice.

We found that customer transaction experience acts a quasi-moderator rather than a pure moderator as it has a significant influence ($\beta = 0.116$, p-value = 0.000) on purchase intention. This is consistent with the propositions of Information processing theory of customer choice. Customers with greater transaction experience become familiar with the purchase and decision making. As customers are inclined toward reducing cognitive effort in decision making, prior transaction experience plays a significant role in determining purchase intention.

Second, customer transaction experience had a significant moderating effect on the relationship between convenience and purchase intention and perceived price and purchase intention. Convenience is a functional attribute of Internet shopping, whereas perceived price is a non-functional attribute of Internet shopping. The impact of both these attributes on purchase intention reduces as customer transaction experience increases. According to information processing theory of customer choice, less-experienced customers evaluate attributes to a greater depth than more-experienced customers. This is because less-experienced customers have the ability to evaluate the attributes as well as the motivation to do so (since they haven't yet developed full understanding of the purchase process). More-experienced customers, on the other hand, lack motivation to evaluate (although they have the ability) on account of desiring to simplify the decision making, especially for common repeat-purchases.

Third, customer transaction experience did not have a moderating effect on the relationship between perceived value and purchase intention. Ideally the impact of perceived value on purchase intention

should reduce with transaction experience as customers with greater transaction experience decide their purchases based on only the most decision-relevant information of Internet shopping. We did a sub-group analysis between less-experienced and more-experienced repeat customers by splitting the data along the mean transaction experience. The results reveal that only perceived value influences purchase intention for more-experienced group customers and the influence of perceived value on purchase intention is weaker than in case of less-experienced group customers. This implies that perceived value is the most important purchase decision criteria for more-experienced repeat customers, and therefore, its influence on purchase intention is increasing with transaction experience.

The moderating effect of transaction experience on the relationship of perceived risk and purchase intention was insignificant. According to information processing theory of customer choice, customers increasingly focus on relevant information for decision making as their transaction experience increases. As perceived risk in Internet shopping reduces with every subsequent purchase, customers may not consider it as relevant for decision making. The moderating effect of transaction experience on the relationship of pleasure and purchase intention was also insignificant. The reason may be that the pleasure is an experiential attribute. So, once experienced, it need not be evaluated again and again, just recall is enough.

The influence of perceived risk on purchase intention was not significant. This result is inconsistent with past research, which posits that perceived risk is a major barrier to Internet transactions (Jarvenpaa and Todd 1997). The apparent contradiction may be because the customers in our study were all repeat customers having Internet shopping experience from the same online store, which would alleviate their concerns about perceived risk (Perceived Risk: Mean = 2.40, SD = 0.99) in shopping over the Internet. Looking beyond the role of Internet experience, the results of this study show that the effect of perceived risk on purchase intention is fully meditated by perceived value. Thus, this study extends the finding of previous research (Jarvenpaa and Todd 1997) by showing that perceived risk influences online customer purchase intention indirectly through perceived value.

The results of this study must be interpreted in the context of its limitations. First, the data for this study was collected from the customers of a single Internet bookstore. It is useful to replicate this study over a variety of online vendors so that the robustness of the results can be established. For example, we have focused on an Internet bookstore where product quality varies little. Hence, future studies can replicate this study over various online vendors and across various products, especially which vary greatly in quality (e.g., watches, fashion apparel). Second, the data was collected via an online survey for a period of 10 days. It is useful to assess the robustness of the results at other times of the year to account for seasonal variations, if any, in terms of the types of customers who visit the website of an Internet bookstore. Third, books fall into the category of low involvement products. For high involvement products, the transaction experience may have different moderating effect. Future studies may replicate this study in the context of high involvement product for establishing generalizability of our results.

6 CONCLUSIONS AND IMPLICATIONS

We studied the moderating role of transaction experience on repeat customer value-driven decision making. A number of studies studying repeat purchase behaviour neglect the changes in customer decision with transaction experience. This study is thus a milestone in repeat purchase decision making research. Our research has several implications for theory. First, our research empirically examined the moderating role of transaction experience on repeat customer purchase decision-making. Customer transaction experience had a significant moderating effect on the transaction utility of Internet shopping, namely convenience and perceived price. However, there was no moderating effect on affective attribute for Internet shopping, namely pleasure. This implies that affective attributes do not have an increasing impact on customer purchase intention over transaction experience. But cognitive attributes influence customers purchase intention over transaction experience. This is one of the shortcomings of expectation-disconfirmation models which attempts to understand customer

purchase intention from the satisfaction perspective. As satisfaction is largely an experiential attribute of Internet shopping (equivalent to pleasure in our research), its role would be limited to understanding a part of customer decision making and the models based on satisfaction will not show differences between less-experienced and more-experienced repeat customers. The difference in the decision-making arises due to cognitive attributes of Internet shopping. In other words, the results from expectation-disconfirmation model cannot be generalized for the whole range of repeat customers over transaction experience.

Second, this research shows an improvement over IT adoption based studies. IT adoption based studies focus on the role of cognitive processing that occurs immediately prior to the act of purchase. That is, they only consider the processing of available information regarding purchase and neglect the role of recall of prior information and evaluations stored in memory. As many repeat purchase decisions are made repeatedly or frequently over time, they involve continuous processing of information (Hogarth 1981) where the recall of evaluation from memory influences customer decision making. Due to sunk costs of decision making, repeat customers recall their previous decisions which influence their purchase decision-making. In such instances, the relationship between attributes of Internet shopping on purchase intention would become weaker than when the decision is made without reference to previous purchases. As IT adoption perspective does not consider recall of information from previous purchases, the results may be erroneous.

Our research also has several implications for Internet vendors. First, the results of this study indicate that Internet vendors should differentiate between less-experienced and more-experienced repeat customers. Less-experienced customers are more sensitive to convenience and perceived price of Internet shopping than more-experienced customers. Therefore, Internet vendors should provide greater convenience options, price discounts or coupons. Internet vendors should also seek customer feedback on convenience provided by the Internet vendor. With more-experienced repeat customers, Internet vendors should focus on providing greater value of Internet shopping. Here, they can provide value-added options in shopping and charging a higher amount for the service. This will also improve their profitability. For example, they may provide same day delivery at a higher price, features like browsing the book at some price and so on.

Second, Internet vendors should accelerate transaction experience of repeat customers as increased transaction experience has a direct and significant effect on customer purchase intention. For example, Internet vendors can develop rebate program whereby a customer with more than a specific number of transactions can enjoy a greater number of services in their purchases. In this manner they would not only accelerate less-experienced repeat customers to the more-experienced stage, but their profitability will also increase.

Third, as repeat customers tend to reduce cognitive effort in decision making by recalling their prior experiences, Internet vendors should aid repeat customers recall of their prior experiences with the Internet vendor. For example, Internet vendors may enumerate past successful experiences (e.g., success rate) of customer with the Internet vendor. They may aid recall by enumerating success rate of other customers with the Internet vendor. They may also provide customer purchase profile with the Internet vendor in regards to points earned in shopping with the Internet vendor and how those points can help the customer in gaining purchase benefits in shopping with the Internet vendor.

References

Alba, J. and Hutchinson, W. (1987). Dimensions of consumer expertise. Journal of Consumer Research, 13(4) 411 - 454.

Anderson, J.C. and Gerbing, D.W. (1988). Structural equation modelling in practice: A review and recommended two-step approach. Psychological Bulletin, 103(3), 324-411.

Berry, L.L., Seiders, K. and Grewal, D. (2002). Understanding service convenience. Journal of Marketing, 66(3), 1-17.

Bettman, J.R. (1979). An Information Processing Theory of Consumer Choice. Addison-Wesley, Reading, MA.
Bettman, J.R. and Park, C.W. (1980). Effects of prior knowledge and experience and phase of the choice process on consumer decision processes: A protocol analysis. Journal of Consumer Research, 7(3), 234-248.
Byrne, M.B. (1998). Structural Equation Modelling with LISREL, PRELIS, and SIMPLIS: Basic Concepts, Applications and Programming, Lawrence Erlbaum Associates, New Jersey.
Chen, Z. and Dubinsky, A.J. (2003). A conceptual model of perceived customer value in e-commerce: A preliminary investigation. Psychology and Marketing, 20(4), 323-347.
Cohen, J.B. and Areni, C.S. (1991). Affect and Consumer Behaviour. In Handbook of Consumer Behaviour (Thomas, S.R. and Kassarjian, H.H. Eds.), p. 188-240, Prentice Hall, Englewood Cliffs, New Jersey.
Deci, E.L. (1975). Intrinsic motivation. Plenum, New York.
Dodds, W.B., Monroe, K.B. and Grewal, D. (1991). The effects of price, brand and store information on buyers' product evaluations. Journal of Marketing Research, 28(3), 307–319.
Donovan, R.J., Rossiter, J.R., Marcoolyn, G., and Nesdale, A. (1994). Store atmosphere and purchasing behaviour. Journal of Retailing, 70(3), 283-294.
Downs, A. (1961) A theory of consumer efficiency. Journal of Retailing, 37(1), 6-12.
Fenech, T. and O'Cass, A. (2001). Internet users' adoption of web retailing-user and product dimensions. Journal of Product and Brand Management, 10(6), pp. 361-381.
Grewal, D., Iyer, G.R., Krishnan, R. and Sharman, A. (2003). The Internet and the price-value-loyalty chain. Journal of Business Research, 56(5), 391-398.
Grewal, D., Monroe, K.B. and Krishnan, R. (1998). The effects of price comparison advertising on buyers' perceptions of acquisition value, transaction value, and behavioural intentions. Journal of Marketing, 62(2), 46-59.
Gurumurthy, K. and Russell, S.W. (1995) Empirical generalizations from reference price research. Marketing Science, 14(3), 161-169.
Hogarth, R.M. (1981) Beyond discrete biases: Functional and dysfunctional aspects of judgmental heuristics. Psychological Bulletin, 90(2), 197-217.
Jarvenpaa, S.L. and Todd, P.A. (1996-97). Consumer reactions to electronic shopping on the World Wide Web. International Journal of electronic Commerce, 1(2), 59-88.
Kahneman, D. and Tversky, A. (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263-291.
Lazarus, R.S. (1991). Emotion and Adaptation. Oxford University Press, New York.
Mehrabian, A. and Russell, J.A. (1974). An Approach to Environmental Psychology. Massachusetts Institute of Technology Press, Cambridge, Massachusetts.
Mowen, J.C. (1992). The time and outcome valuation model: Implications for understanding reactance and risky choices in consumer decision-making. Advances in Consumer Research, 19, 182-189.
Reibstein, D.J. What attracts customers to online stores, and what keeps them coming back. Journal of the Academy of Marketing Science, 30, 4 (Fall 2002), 465-473.
Reichheld, F.F. and Schefter, P. (2000). E-Loyalty: Your secret weapon on the web. Harvard Business Review, 78(4), 105-113.
Sharma, S., Durand, R.M. and Oded, G.A. (1981). Identification and analysis of moderator variables. Journal of Marketing Research, 18(3), 291-300.
Sweeney, J.C. and Soutar, G.N. (2001). Consumer perceived value: The development of a multiple item scale. Journal of Retailing, 77(2), 203-220.
Thaler, R. (1985). Mental accounting and consumer choice. Marketing Science, 4(3), 199-214.
Torkzadeh, G. and Dhillon, G. (2002). Measuring factors that influence the success of internet commerce. Information Systems Research, 13(2), 187–204
Urbany, J.E., Bearden, W.O., Kaicker, A., and Borrero, M.S. (1997). Transaction utility effects when quality is uncertain. Journal of the Academy of Marketing Science, 25(1), 45-55.
Zeithaml, V.A. (1998). Consumer perceptions of price, quality and value: A means-end model and synthesis of evidence. Journal of Marketing, 52(3), 2–22.